Metis Security Products

Dual input GSM AutoDialer

Firmware Version 3.06

Metis Products

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General

Congratulations on the purchase of your Dual input GSM AutoDialer. The GSM AutoDialer has been designed to be the most cost effective method of informing you of your remote alarm activation. Using a Pay As You Go SIM CARD the cost of ownership of this device is minimised to the amount of communication between it and your mobile phone. There is no call centre charge or messaging on-cost with this product.

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FCC Conformance

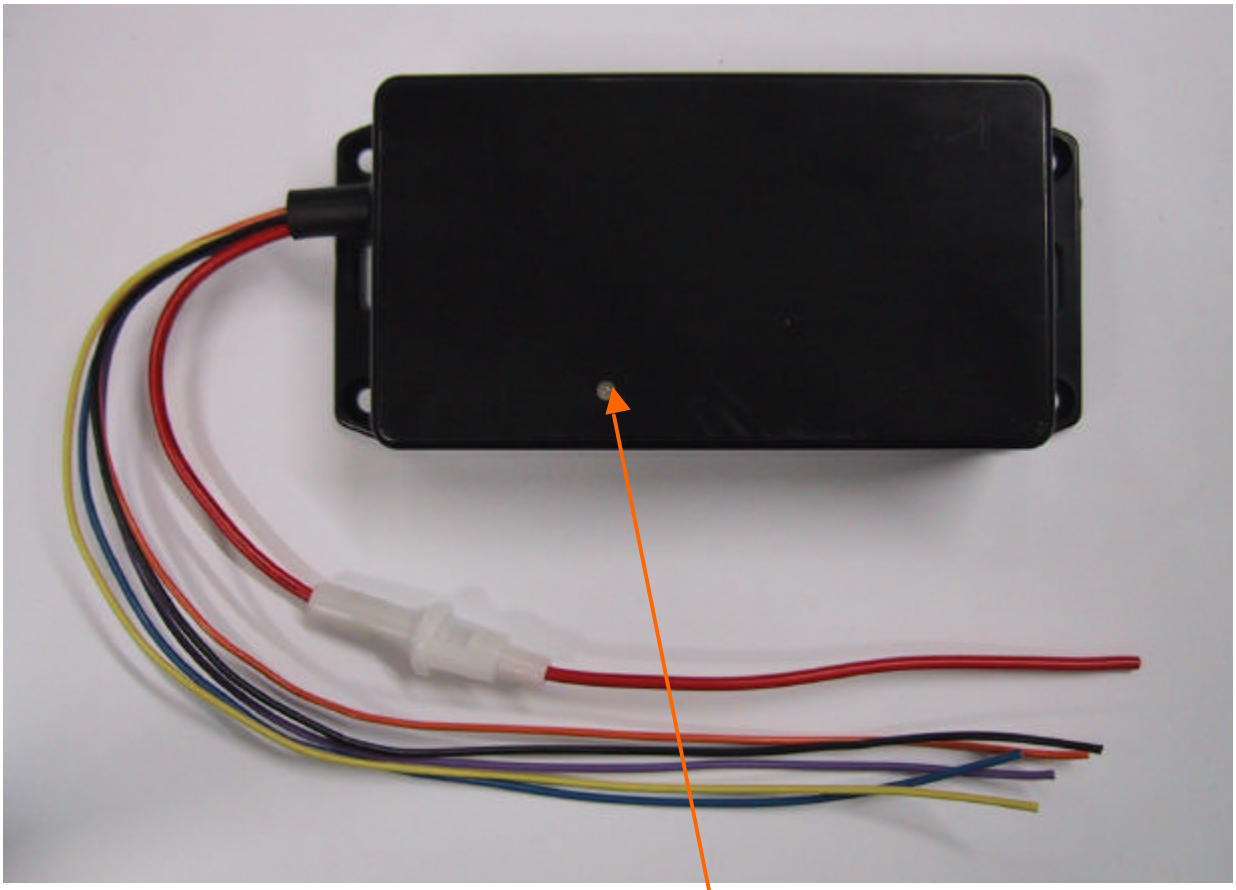
The modem was tested and certified to meet FCC Parts 15 in a stand-alone configuration, which demonstrated that the Metis Products GPS Alert complies with Part 15 emission limits.

Hardware Setup

AutoDialer Connections

There are Six external wired connections to the Dual input AutoDialer…
RED is the positive supply voltage.
BLACK is the supply return.
Yellow is Alarm 1 Input.
Orange is Alarm 2 input.
Blue is Output 1.
Purple is Output 2.

The AutoDialer can accept any DC Voltage from 8 Volts to 35 Volts; it is best to use a constant regulated power supply or battery. During normal operation it will draw an average of 24mA and during network / SMS message transmission 140mA.



The Activity LED shows the current status of the AutoDialer.

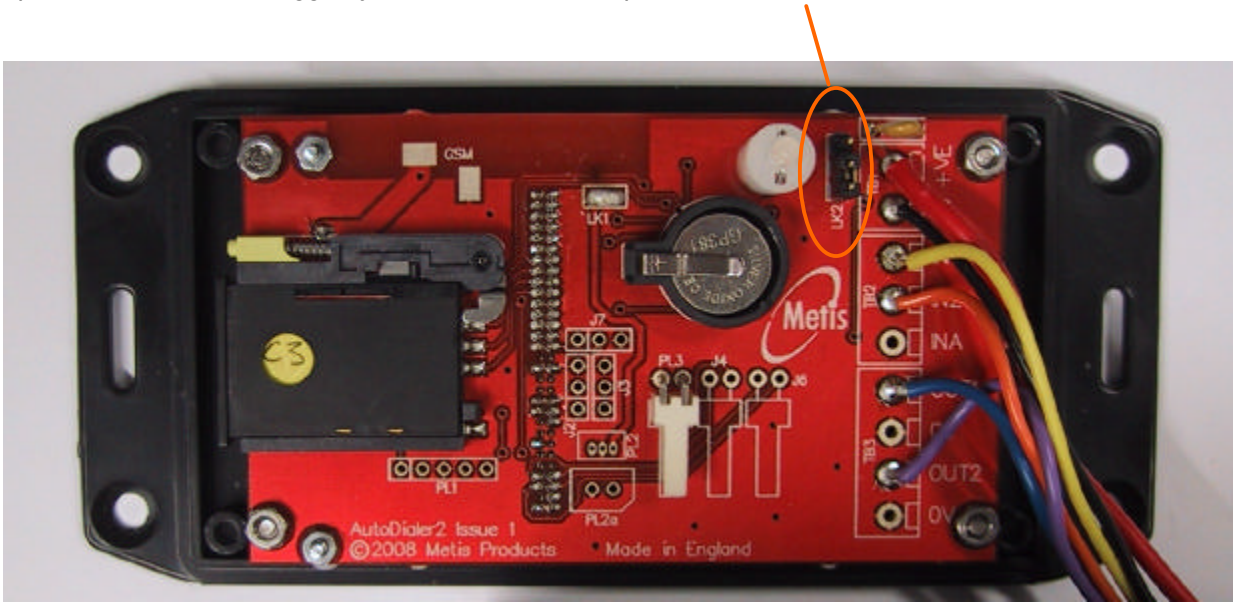
RED Flashing - Attempting to connect to GSM Network

GREEN Flashing - Network connection OK -

ORANGE - Transmitting on GSM Network

Trigger option Link (LK2)

Input 1 on the Auto Dialler (the Yellow alarm wire) can be configured for two trigger options. These are Active Low (for connection to an Alarm Sounder return), and Three-State (For active High / Low or Open Circuit option). The trigger is set to Active Low by factory default. If you would like to change the operation of the alarm trigger, you need to move the position of LK2.



Active Low Trigger

With the Jumper set in the nearest board edge position, the Alarm will only trigger on a low input voltage. This setting is intended for applications where the trigger wire may not reach true Ground for example an Alarm Bell "-" input. This is the factory default setting for the trigger.

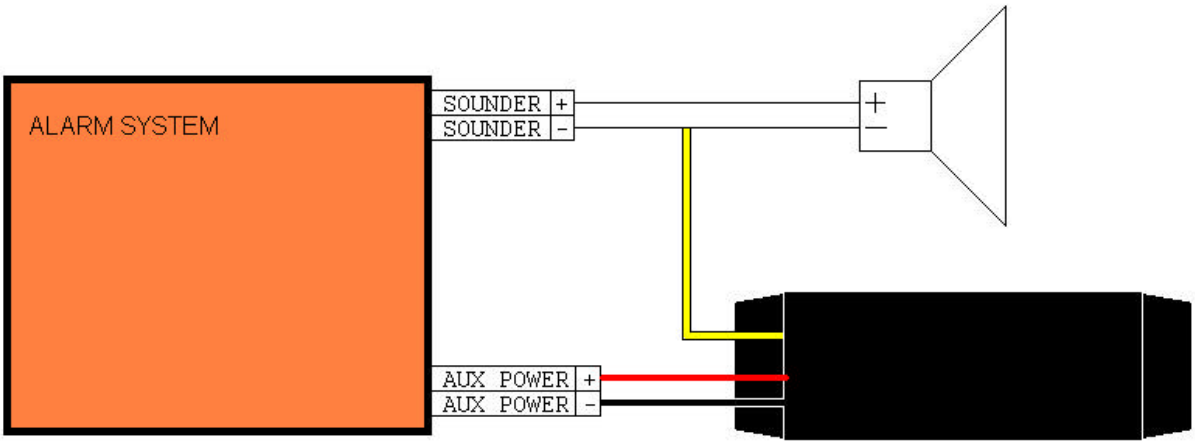
Three State Trigger

With the Jumper set in the furthest from board edge position, the Alarm can be configured to trigger on three voltage options.
Active low (less than 1/2 Volt between AutoDialer Ground and Trigger wire).
Active high (more than 2 Volts between AutoDialer Ground and Trigger wire).
Active Open Circuit (No voltage present on Trigger wire).

Please note that Alarm Input 2 only operates in the Three state trigger mode, so if you intend to connect your dual dialler to an existing alarm system using the bell or sounder return you must use Input 1 (Yellow trigger wire) see following section for more information.

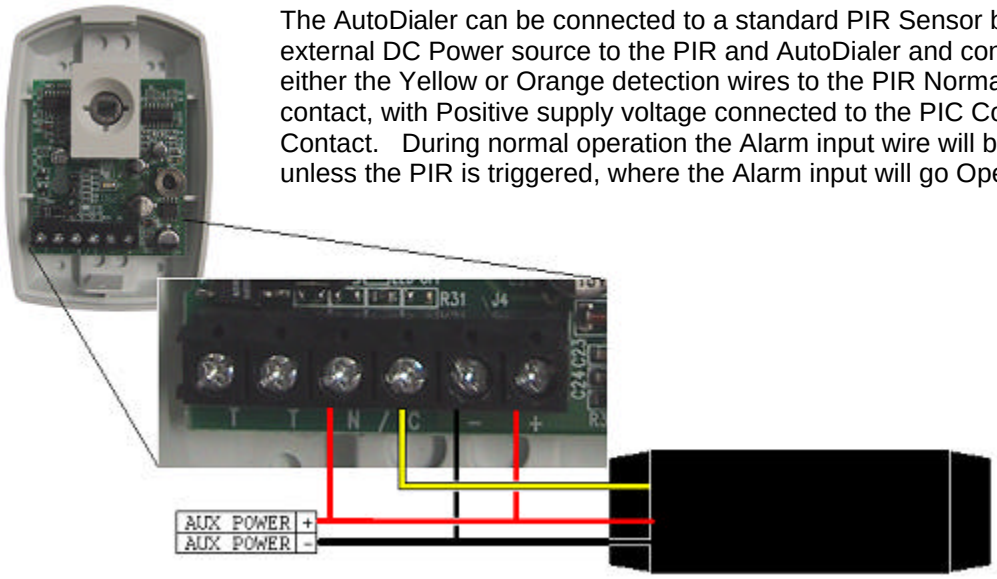
Connecting AutoDialer Input 1 to a Standard Alarm

The GSM AutoDialer Input 1 can be connected to a standard alarm system by connecting the Power from the Alarm system AUX power to the AutoDialer Positive and Negative supply inputs, and the Yellow alarm wire to the Sounder "–" connection.



The AutoDialer Input 1 trigger will need to be configured to "Active Low" (Please see configuration section), and the trigger select link "LK2" will need to be placed in the Active Low Position (Factory Default).

Connecting the AutoDialer to a PIR Sensor

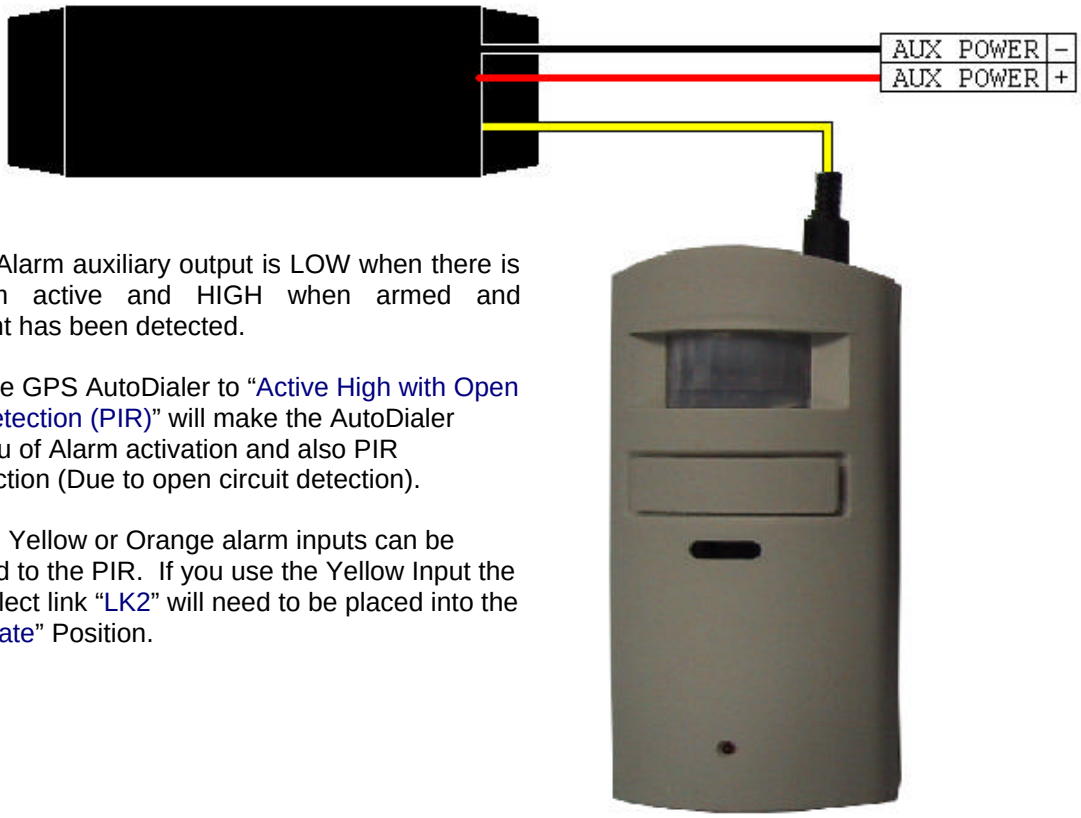


The AutoDialer can be connected to a standard PIR Sensor by sharing an external DC Power source to the PIR and AutoDialer and connecting either the Yellow or Orange detection wires to the PIR Normally Closed contact, with Positive supply voltage connected to the PIC Common Contact. During normal operation the Alarm input wire will be held High unless the PIR is triggered, where the Alarm input will go Open Circuit.

The AutoDialer will need to be configured to "Active Open Circuit" on the website (see configuration section), and if using the Yellow Alarm input, the trigger select link "LK2" will need to be placed in the Three State Position.

Connecting the AutoDialer to a PIR Alarm

The PIR Alarm is a self contained PIR Detector with internal power and Alarm sounder. This can be connected to the GSM AutoDialer to give a local audible intruder alarm, and also a remote SMS alarm activation message.



The PIR Alarm auxiliary output is LOW when there is no alarm active and HIGH when armed and movement has been detected.

Setting the GPS AutoDialer to "Active High with Open Circuit Detection (PIR)" will make the AutoDialer inform you of Alarm activation and also PIR disconnection (Due to open circuit detection).

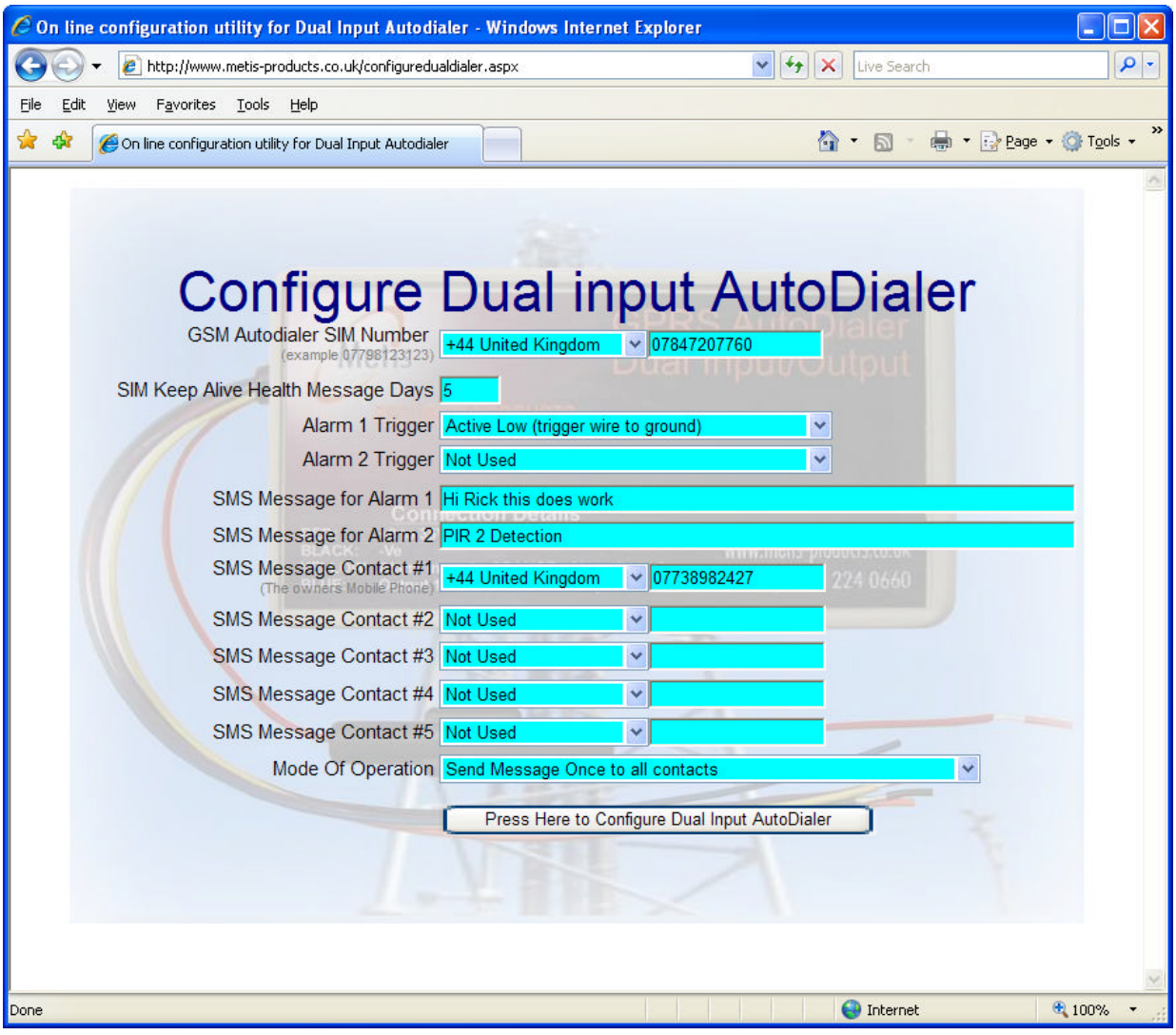
Either the Yellow or Orange alarm inputs can be connected to the PIR. If you use the Yellow Input the trigger select link "LK2" will need to be placed into the "Three State" Position.

Configuration of AutoDialer

Before configuring the AutoDialer you need to first register your SIM card and place credit on the account using the information supplied with your network providers SIM card.

Using a Personal Computer connected to the Internet run the configuration page located at http://www.metis-products.co.uk/configuredualdialer.aspx

Please verify the web page you are accessing states Configure Dual input Auto dialler, if you use the incorrect configuration website the dialler will ignore your configuration.

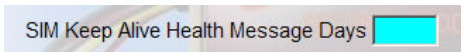


The first time you load the webpage all of the content fields will be empty. Once you have configured your AutoDialer the contents of the page will be saved on your local PC as cookies, the next time you access the page your previous information will be retrieved.

GSM AutoDialer SIM Number

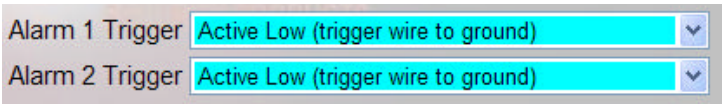
Here you enter the SIM Number of your AutoDialer. This number is can be found within the documentation of the Mobile Phone Network Provider SIM card sent with your AutoDialer.
The first field is for the Country Code of the SIM, for example if UK use +44. The second field is for the mobile phone number of the AutoDialer SIM card. This number must be entered as it appears in the documentation including any leading Zeros.

SIM Keep Alive Health Message Days



To keep the SIM card active on the mobile phone network it is necessary to make at least one SMS message every 180 days. You can configure the AutoDialer to automatically send you a SMS health to both keep the SIM active on the mobile phone network and also re-assure you the AutoDialer is still monitoring your alarm / PIR.

Alarm Triggers



Alarm Trigger determines what the AutoDialer will do with the Yellow (Alarm 1 Trigger) and Orange (Alarm 2 Trigger) input wires. The triggers can be set to one of four options.

- **Not Used.**
  In this mode the AutoDialer will never react to any state of the Alarm input.

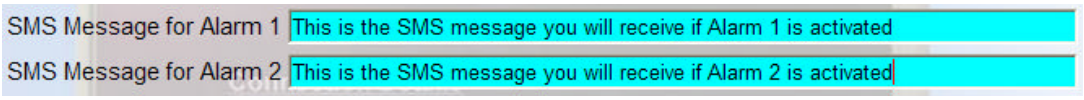
- **Active High (voltage on trigger wire)**
  In this mode more than 2 volts detected on the trigger wire will trigger an Alarm SMS message.

- **Active Low (trigger wire to ground)**
  Yellow (Alarm 1 Input)
  If “LK2” is set to “Active Low Trigger” then any voltage less than 2 Volts under the Positive supply voltage will trigger an Alarm SMS message.
  If “LK2” is set to “Three State Trigger” then a voltage less than ½ a Volt will trigger an Alarm SMS message.
  Orange (Alarm 2 Input)
  Some Alarm systems bell negative return do not produce a low enough voltage to trigger an alarm, in these cases use the Yellow (Alarm 1 Input) and select “LK2” to “Active Low Trigger”.

- **Active Open Circuit (trigger when disconnected)**
  If the Alarm input is disconnected then an Alarm SMS Message will be sent.

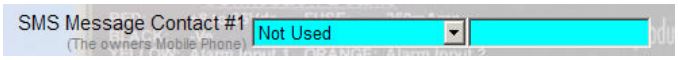
- **Active High with open Circuit detection (PIR)**
  This mode has the same trigger as the Active High mode, with the added feature that if an open circuit is detected you will receive a “Open Circuit” message. Most often used with a PIR Alarm.

SMS Messages on Alarm

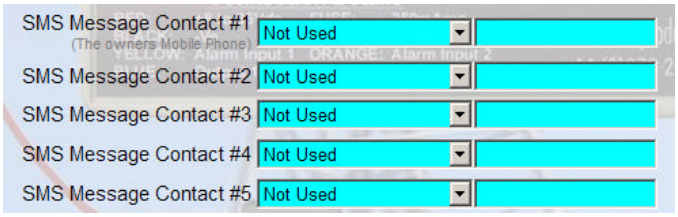

SMS Message for Alarm 1
This is the SMS message you will receive if Alarm 1 is activated
SMS Message for Alarm 2
This is the SMS message you will receive if Alarm 2 is activated

On the event of either Alarm input being triggered the SMS Text message stored for the trigger will be sent to the AutoDialer contact(s). The message can contain numbers and letters to a maximum size of 79 characters. Messages sent to land lines will be read out by a text to speech processor provided by the land line service provider.

SMS Message Contact #1



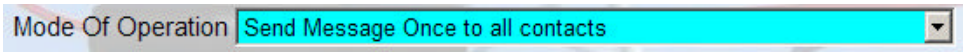
This number will be the first contact to receive the SMS message in the event of an Alarm trigger event. Also this contact will receive the automatic SIM Keep alive message.
The first field is the Country Code of the contact telephone number, for example if UK use +44. The second field is for the telephone number of the contact. This number must be entered in full including area code and any leading Zeros.



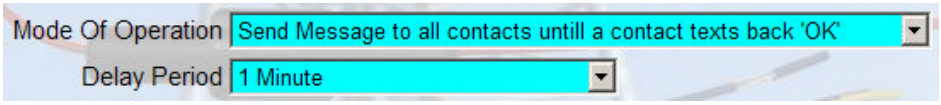
At least one contact number must be entered to complete the configuration starting with contact number one. An optional 4 more contacts may be added, if they are not required select “Not Used” from the telephone number country code drop down list.

Mode Of Operation

The AutoDialer operates in two contact modes:



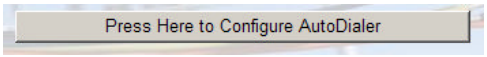
On the event of an Alarm trigger the SMS Alarm message will be sent to all contacts on the list. No more messages will be sent until the Alarm trigger has reset and then set again.



The Alarm message will be sent to all contacts in the contact list with a set period delay between each message. Any contact sending the AutoDialer a text message “OK” will stop the message being sent.

The Delay period can be set to 1 minute, 5 minutes, 10 minutes, 30 minutes and 1 Hour.

Uploading the Configuration to the AutoDialer



Once all your configuration information has been entered onto the website press the "Press Here to Configure AutoDialer" button. This will save your configuration information in a secure file on the internet server.

A message will appear requesting that you now text the word "setup" to your AutoDialer SIM telephone number to complete the configuration of your AutoDialer.

Please text the word 'Setup' to 09999999999 or +449999999999 (international) to download this configuration information into your Autodialer

Sending a text message "**setup**" to your AutoDialer will instruct it to fetch and install the configuration information you entered into its non volatile memory. The time and date of your mobile phone will also set the AutoDialer internal clock.

Upon successful configuration you will receive a Text message telling you "AutoDialer Configuration Complete".

Operating instructions for the PIR Alarm

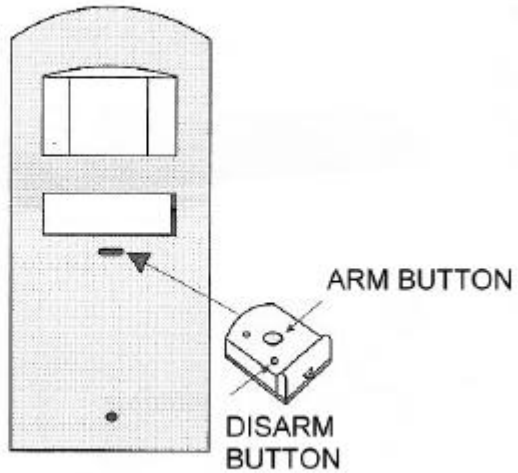
PIR Alarm Installation

Place the PIR alarm in the desired location and secure in place. The back cover can be securely held to a wall using screws. The unit can then be secured to the back cover using the screw located in the base of the unit.

PIR Alarm Operation

Press the arm button on the remote control while pointing at the unit (see diagram 3). This will activate the alarm. There will be a delay of 30 seconds to enable you to leave the area before the alarm is armed. Note: Arming the PIR Alarm does not arm the GPRS AutoDialer.

On returning to the protected area: Press the disarm button on the remote control while pointing at the PIR Alarm. This will disarm the alarm. There is an entry delay period of 4 seconds during which the alarm will not sound. After the first bleep there is a further delay of 4 seconds before the siren sounds.



SMS Commands

The AutoDialer has a built in command language to allow you to arm / disarm the alarm input and check its status. Commands are sent as standard SMS text messages; the AutoDialer will respond to you with SMS text Messages. All SMS text commands are case insensitive, i.e. "**HEALTH**", "**health**", or "**HeAlTh**" will all work.

PIN Command

For security you can set a 4 digit PIN (Personal Identification Number). Once a PIN has been set, every following command will have to start with the PIN followed by a comma, and any attempt to reconfigure the GSM AutoDialer will result in the Owner being informed by text that configuration is not possible due to PIN lockout.

Example:

Send an SMS Text "**Health**" to your GSM AutoDialer to obtain the GSM Signal strength and Alarm Status. The AutoDialer will respond with it's status. Now Text "**pin=1234**" (no spaces) to your AutoDialer. This will set the PIN to 1234. Now re-send the SMS Text "**Health**" message, the AutoDialer will respond with a message "Incorrect PIN!" To request a health message you will need to send the PIN number with the health message. Send an SMS Text "**1234,Health**" (no spaces) to request the AutoDialer Status.

Sony Ericsson
PIN number has been set to:1234
Every Command to AutoDialer must start with your pin and a comma eg 1234,health
Cybershot

To disable the PIN you will need to set the PIN number back to 0000. To do this text "**1234,pin=0000**" (where 1234 is the actual PIN Number you have set). The GPS Alert will respond with an SMS message stating, "PIN code has been disabled"

The PIN number is set within the non-volatile memory of the GPS Alert, once set if you forget the number the unit must be sent back to the factory to be reset. Always keep your PIN number secure and ensure it is a number you will not forget.

Credit Command

If you are operating on the Virgin mobile phone network it is possible to check the available Credit on your SIM card account by Texting the word "**credit**" to your AutoDialer. The AutoDialer will respond with a message telling you how much credit is available. The AutoDialer checks the available credit each time it sends an SMS message, and will automatically send you a low credit message if below £1.00.

For details on how to top up your account see the SIM credit section.

Health command

To request GSM Signal strength and Alarm status text the word "**health**" to the AutoDialer, it will respond within a minute with its current status.

GSM Signal strength
Very Good > 75%
Good 50% - 74%
Medium 25% - 49%
Low <25%

Alarm Inactive
The alarm input has not been triggered. Active indicates the input has been triggered

Count down to SIM Keep Alive health message. Message will be sent at 12:00 noon

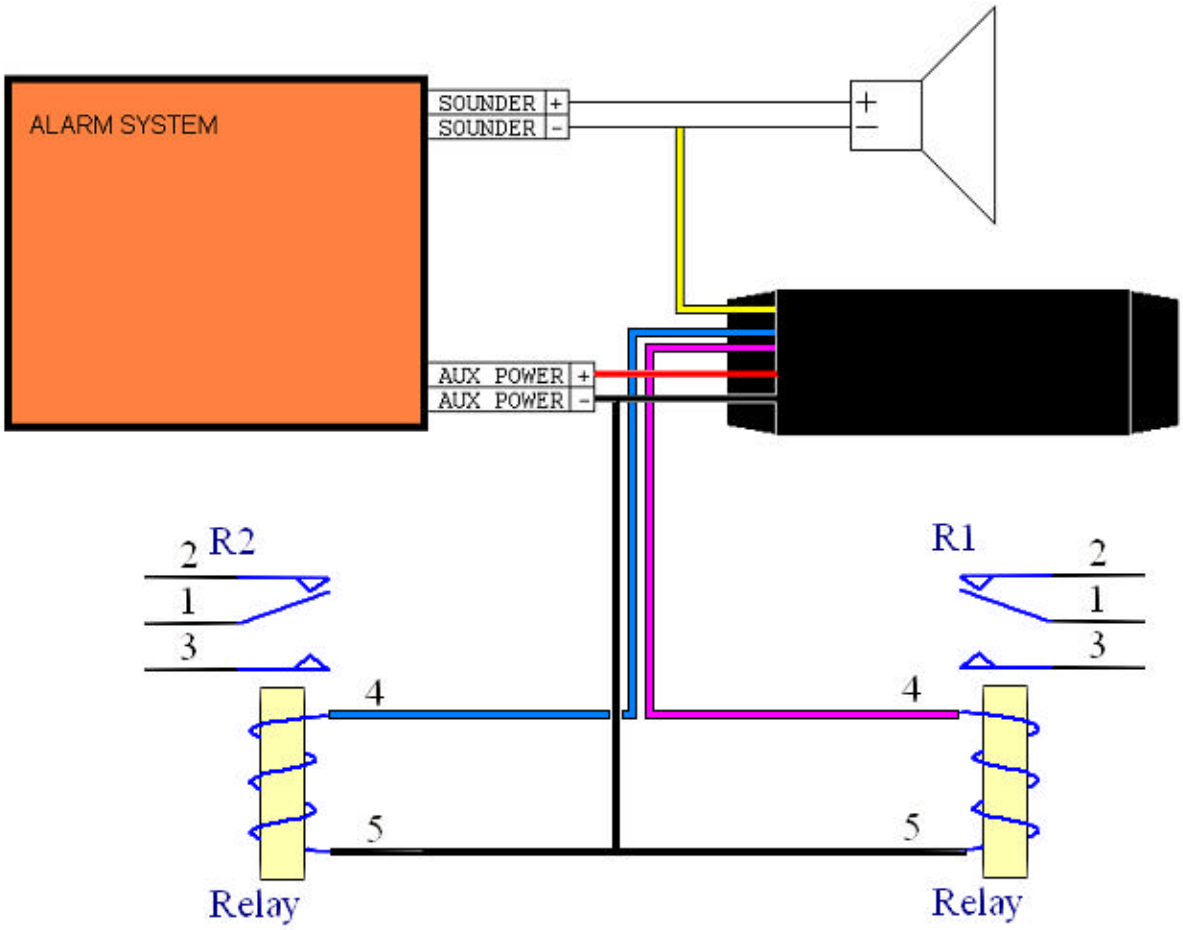
Alarm 1 and 2 Triggers
Active level for alarm trigger
Low / High / Open or High (PIR)

Alarm Armed
If alarm input is triggered a message will be sent. If disarmed no message will be sent on an alarm trigger

If the AutoDialer requires configuration it will respond with the message "AutoDialer Needs configuration". Please see the configuration section for details on how to configure your AutoDialer.

Auto Dialler output Commands

Each of the two Auto Dialler outputs are driven by a SMS text message. Each output will drive the positive supply voltage up to 250mA through a P – Channel MOSFET to the output cable. These outputs are intended to drive a relay coil so that devices like remote lighting / Alarm Bells can be turned on. Each output has a built in back EMF diode already fitted, so you just need to wire the relay coil directly to the output.



The outputs are not over current protected, if you over-load the outputs permanent damage will occur to your Auto Dialler.

To turn Output 1 (Blue Wire) On, text "**relay 1 on**".

To turn Output 1 (Blue wire) Off, text "**relay 1 off**".

To turn Output 2 (Purple wire) On, text "**relay 2 on**".

To turn Output 2 (Purple wire) Off, text "**relay 2 off**".

Disarm Command

By default the AutoDialer is armed. To disarm the AutoDialer, text "**disarm**" to your AutoDialer. The AutoDialer will respond with a message telling you the AutoDialer has been disarmed. If the alarm input is triggered you will not receive an alarm SMS message. You can verify the status of the Alarm input by using the "**health**" command.

Arm Command

To arm the AutoDialer, text "**arm**". The AutoDialer will respond with a message telling you the AutoDialer has been armed. Now if the alarm input is triggered you will receive an alarm SMS message. The status of the Alarm input can be verified using the "**health**" command.

Alarm Acknowledge Command

To acknowledge alarm message has been received, text "**ok**" to the AutoDialer. This will prevent the AutoDialer from messaging any other numbers in its contact list (if that is how you have configured it).

Change Trigger Input Level

To change the trigger input 1 level via text message, text "**trigger high**", "**trigger low**", "**trigger open**", or "**trigger hi+oc**", to select the trigger mode.

To change the trigger input 2 level via text message, text "**trigger 2 high**", "**trigger 2 low**"," **trigger 2 open**", or "**trigger 2 hi+oc**".

Trigger Modes explained :

trigger high	(Voltage on trigger wire)
trigger low	(Trigger wire to ground)
trigger open	(If trigger is disconnected from voltage or ground)
trigger hi+oc	(This is for plug in PIR alarm system)

The dialler will respond with a text message confirming that the trigger level has been set.

The current trigger levels can be checked using the "**health**" text command.

Change Alarm Messages

To change Alarm message 1 message, text "**message=my shed is being broken into**"

To change Alarm message 2 message, text "**message2=my shed is being broken into**"

The dialler will respond with a text message confirming that the message has been set.

Change Health Message Days

To change the number of days that the Autodialer will text you a health message to tell you that it is all working ok, text "**days=30**"

This can be set from 1 to 180 days

The dialler will respond with a text message confirming that the days have been set.

Change Contacts

To change your alarm contacts using a SMS Message, send a text to the dialler "**contacts=+441234567890,+44123456789,1+4423456789**".

You can send from 1 to 5 numbers, they must be separated by a comma. To insure alarm operation please use your whole telephone number including country code. IE +441473743700.

The dialler will respond with a text message confirming that the contacts have been set.

List Contacts

To list the current contacts in your dialler send a text command "**list contacts**". You will receive a SMS message containing all your current contacts. Unused contacts will be listed as "0"'s.

Alarm Message repeat

To set the dialler to send an alarm message just one time send a text command "**once**". You will receive a SMS message "**Alarm Message will be sent just once to all contacts**"

To set the dialer to repeat sending the alarm message to all contacts until one contact sends back a text "**STOP**" use the text command "**repeat=10**". This will continue to send the alarm message every 10 minutes to all contacts until the dialer receives a "**STOP**" text message.

Alternative network selection

It is possible to use any SIM in the AutoDialer that supports GSM and GPRS Internet access to any URL. Please check the network service provider does not just allow Internet access to their own website, as this will prevent the AutoDialer from being able to download its configuration from our server.

This Version of the Autodialer will automatically swap its network settings by detecting which SIM card is fitted, meaning you no longer need to use the 'NETWORK=x' SMS command to change between Network operators.

We Currently Support the Following Networks.:…

Virgin Contract (Pay Monthly SIM)
T-Mobile Pay as you Go
O2 Pay as you Go
Orange Pay as you Go
Vodafone Pay as you Go

Not supported at this time…

Virgin Pay as you Go
Tesco Mobile
Asda Mobile

Vodafone SIM card

To install a Vodafone sim card you need to activate it first, please follow guide below.

1) Fit Vodafone SIM into your mobile phone.

2) First you will need to put some credit on the card (this needs to be done to register it to the Vodafone network)

3) Make a short call from the Vodafone sim (only has to be a few seconds this will activate the card on the Vodafone network)

4) Remove the card from your phone and place it in the Autodialer.

5) Power the AutoDialer and wait for the green network light.

6) Make sure that you don't trigger any of the inputs till the Autodialer is on network or send any texts.

7) Verify the new network is working by requesting a health message by texting "**health**"
It may take 2 – 3 minutes for the AutoDialer to become active on the new network

SIM Credit

If you are using a Virgin Mobile SIM the GSM AutoDialer will check available SIM credit after each SMS message sent (up to 5 times each day). If your credit falls below £1.00 you will receive a text informing you that the credit is low and you need to top up.

How to Top up your SIM card

To order by phone
0845 6000 070

By credit or debit card

Once you've registered the details of your card, it's quick and easy to top up:
Online - visit Your Account to top-up at www.virginmobile.com

To start topping up with your credit or debit card, you'll need to register it, just visit Your Account and click on 'Register your Credit/debit card'.

By E-top up card

You can top up in loads more places. Plus, it's quicker, too.
You can use your E-top up card in:

- Stores
- Petrol stations
- Corner shops

In fact, you can use it anywhere you see the green top up logo.
Here's how:

- Give your E-top up card to the store assistant and let them know how much credit you'd like.
- You can get as little as £5 or as much as £100 every time.
- Pay as you normally would, then you're done! Easy.

At an ATM (cashpoint)

If you're a customer of NatWest, RBS, Lloyds TSB, Allied Irish Bank, Nationwide, Co-op and many other providers you can top up at any of their ATMs, and any LINK cash machine. Just stick your card in as normal, then select the top-up option instead of cash.

Trouble Shooting

We have compiled a list of common faults and resolutions from ongoing customer support. These are available on our website at www.metis-products.co.uk/autodialer.htm

Glossary of Terms

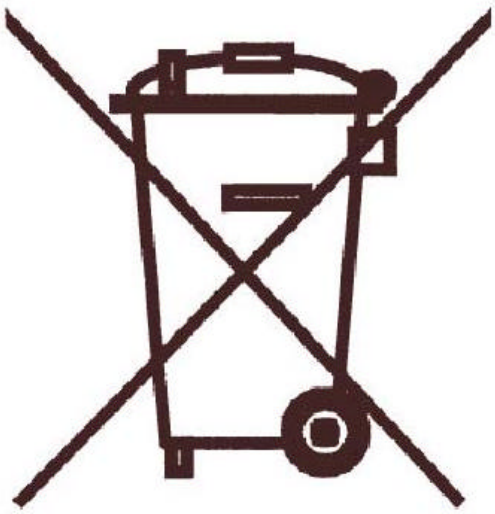
SMS	Short Message Service.
GPRS	General Packet Radio Service. Intended for data transmission, typically for wireless internet.
GSM	Global System for Mobile communications
URL	Unified Resource Location. (This is an Internet address for a File or Resource)
SIM	Subscriber Identification Module

SMS Command Quick Guide

credit	Checks the available credit on your SIM card.
health	Reports on the signal strength of the GSM Network signal and alarm status
pin=1234	Will set a security PIN number. **Don't forget it**!
arm	Will arm the AutoDialer
disarm	Will disarm the AutoDialer
time	Sets the internal battery backed up real time clock to the same time as your mobile.

WEEE-Declaration

Disposal of old electrical and electronic devices (applicable in the European Union and other European countries with separate collection system).
This mark on the product, the packaging or the relevant documentation indicates, that this product may not be treated as ordinary household rubbish. Instead this product has to be delivered to a suitable disposal point for recycling of electrical or electronic equipment. By disposing of this product in the appropriate manner you help to avoid negative impact on the environment and health that could be caused by inappropriate disposal. Recycling of materials contributes to conserve our natural environment. For more information on recycling this product please contact your local recycling centre.



Batteries do not belong into household rubbish!
Please do not dispose of discharged batteries in your household rubbish take them to a collection point at your local recycling centre.

Metis Products